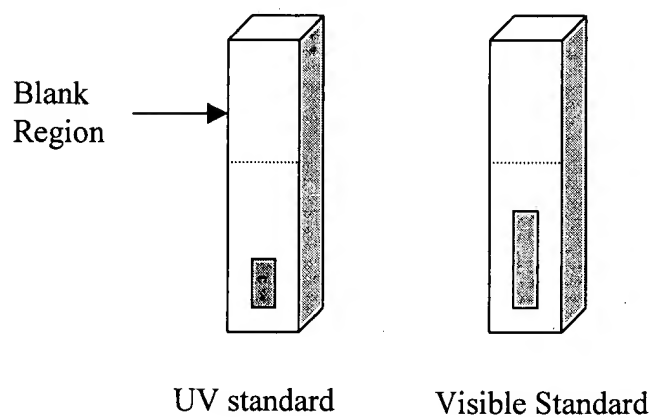


Express Mail No. EL897856634US

Title: METHOD AND APPARATUS FOR VIABLE AND NONVIABLE PROKARYOTIC AND EUKARYOTIC CELL QUANTITATION

Inventors: James E. Fleming et al. Docket No. 390054.402



***Fig. 1***

An example of solid calibration standards for ultraviolet and visible wavelengths that can be used with the Turner Designs Hand-Held picofluor fluorometer.

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(cells/ml= Easy Count Reading X 154578 - 17131723)

Easy Count Reading	Cells/ml
7000	$1.1 \times 10^9$
6000	$9.1 \times 10^8$
5000	$7.6 \times 10^8$
4500	$6.8 \times 10^8$
4000	$6.0 \times 10^8$
3500	$5.2 \times 10^8$
3000	$4.5 \times 10^8$
2000	$2.9 \times 10^8$
1000	$1.4 \times 10^8$

***Fig. 2***

Example of a correlation using the invention to determine total cell counts. Cell counts were determined with the methylene blue technique.

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(Cells/ml = Easy Count Reading X 163343 - 26930879)

Easy Count Reading	Cells/ml
7000	$1.1 \times 10^9$
6000	$9.5 \times 10^8$
5000	$7.9 \times 10^8$
4500	$7.1 \times 10^8$
4000	$6.3 \times 10^8$
3500	$5.4 \times 10^8$
3000	$4.6 \times 10^8$
2000	$3.0 \times 10^8$
1000	$1.4 \times 10^8$

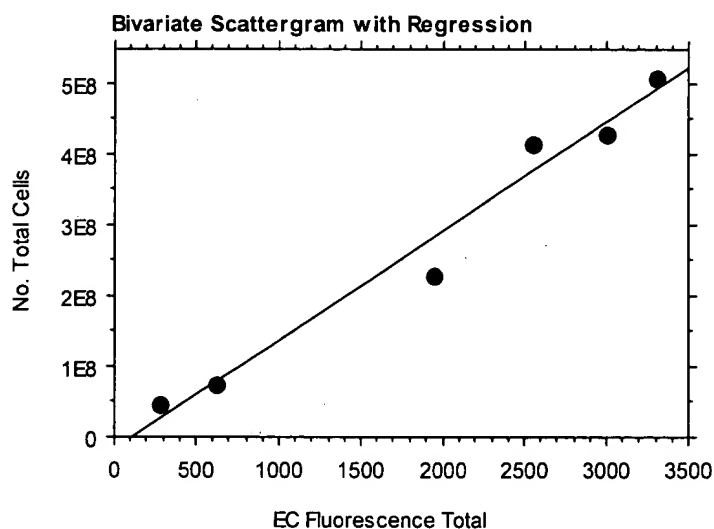
***Fig. 3***

Example of a correlation using the invention to determine live cell counts. Cell counts were determined with the methylene blue technique.

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No. Total Cells = -17131723.193 + 154578.054 \* EC Fluorescence Total; R<sup>2</sup> = .973

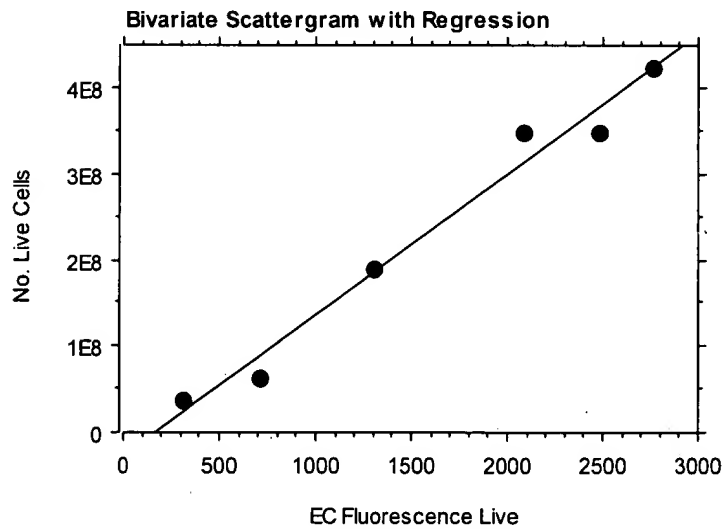
***Fig. 4***

Regression plot showing the relationship between Easy Count fluorescent readings and total cell concentrations of yeast as determined by the methylene blue method.

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No. Live Cells = -26930878.718 + 163342.859 \* EC Fluorescence Live;  $R^2 = .977$

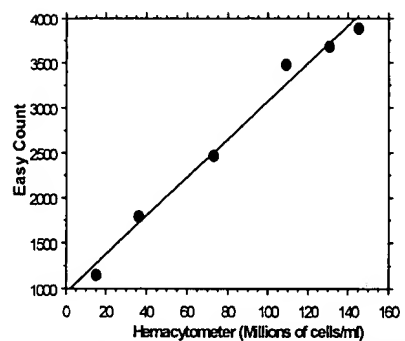
**Fig. 5**

Regression plot showing the relationship between Easy Count readings and viable cell concentrations of yeast as determined by the methylene blue method.

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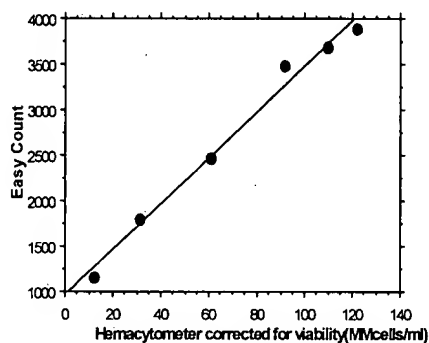
Title: METHOD AND APPARATUS FOR VIABLE AND NONVIABLE PROKARYOTIC AND EUKARYOTIC CELL QUANTITATION

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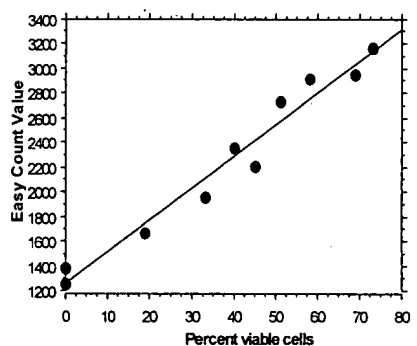
Easy Count = 956.111 + 21.157 \* Hemacytometer (Millions of cells/ml); R<sup>2</sup> = .985

FIGURE 6



Easy Count = 958.81 + 25.098 \* Hemacytometer corrected for viability (MMcells/ml); R<sup>2</sup> = .987

Figure 7



Easy Count Value = 1261.084 + 25.774 \* Percent viable cells; R<sup>2</sup> = .962

Figure 8

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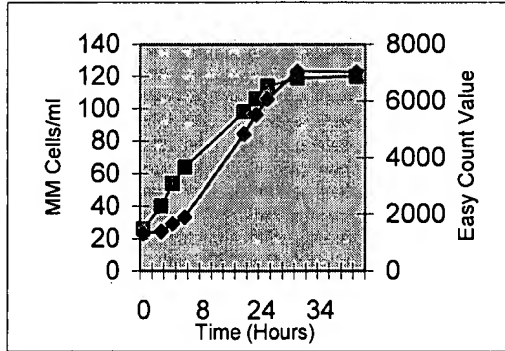


Figure 9

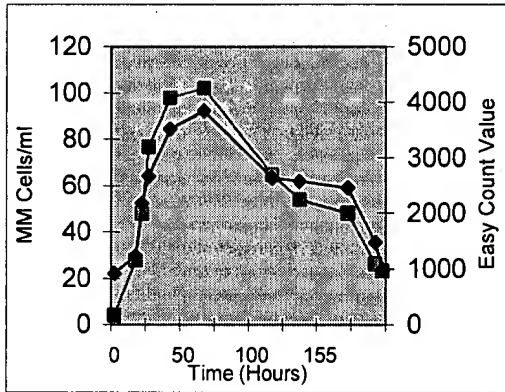


Figure 10

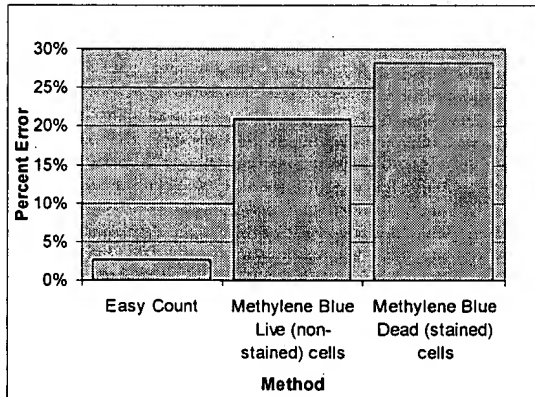


Figure 11